

**CLAIMS:**

1. A disposable absorbent article comprising:
  - (a) a liquid-pervious topsheet,
  - (b) a liquid-impervious and vapor-pervious backsheet having a top surface and a rear surface,
  - (c) a crotch region,
  - (d) a liquid absorbent layer disposed between said topsheet and said backsheet, said liquid-absorbent layer having a crotch region, a top surface and a bottom surface and a single through slit extending from said top surface to said bottom surface of said liquid absorbent layer, said slit being from about 0.5 to about 1.5 inches wide and from about 2 to about 10 inches long and wherein said slit is disposed within the crotch region of said absorbent layer.
2. A disposable absorbent article as in claim 1 wherein said liquid absorbent layer is made of a material comprising a mixture of fluff and superabsorbent polymer (SAP).
3. A disposable absorbent layer as in claim 2 wherein the amount of SAP is from about 3 to about 80 weight percent of said fluff-SAP mixture.
4. A disposable absorbent article as in claim 2 wherein said liquid absorbent layer is defined by a pair of opposed longitudinal sides and a pair of opposed lateral sides, said slit being defined by a pair of opposed longitudinal sides and a pair of opposed lateral sides, a fluff-SAP mixture enriched zone defined between longitudinal sides of said absorbent layer and longitudinal sides of said slit, and lateral sides of said absorbent layer and lateral sides of said slit, and wherein the basis weight of the fluff-SAP mixture in said zone is greater than the basis weight of fluff-SAP mixture in the remaining portion of said absorbent layer.

10066721.020402

- 10066721.020402
5. A disposable absorbent layer as in claim 4 wherein the amount of SAP in said fluff-SAP mixture is from about 3 to about 80 weight percent of said mixture.
  6. A disposable absorbent article as in claim 1 wherein said crotch region has a front edge and a back edge, said absorbent layer has a front edge and a back edge, said elongated slit has a front edge and a back edge and wherein the distance between the front edge of said slit and the front edge of said crotch region is less than the distance between the back edge of said slit and the back edge of said crotch region.
  7. A disposable absorbent article comprising:
    - (a) a liquid-pervious topsheet having opposed lateral ends,
    - (b) a liquid-impervious backsheet having opposed lateral ends,
    - (c) a crotch region,
    - (d) a liquid absorbent layer disposed between said topsheet and said backsheet, said liquid-absorbent layer having a crotch region, a longitudinal axis, a transverse axis, a top surface and a bottom surface, opposed longitudinal sides and opposed lateral sides, and a single elongated through slit extending from said top surface to said bottom surface, said slit having a width of from about 0.5 to about 1.5 inches and a length of from about 2 to about 10 inches, and wherein said slit is disposed within said crotch region of said absorbent layer.
  8. A disposable absorbent article as in claim 7 wherein said liquid-absorbent layer is made of a material comprising a mixture of fluff and superabsorbent polymer (SAP).
  9. A disposable absorbent layer as in claim 8 wherein the amount of SAP is from about 3 to about 80 weight percent of said fluff-SAP mixture.

2006721-020402

10. A disposable absorbent article as in claim 8 wherein said liquid absorbent layer is defined by a pair of opposed longitudinal sides and a pair of opposed lateral sides, said slit being defined by a pair of opposed longitudinal sides and a pair of opposed lateral sides, a fluff-SAP mixture enriched zone defined between longitudinal sides of said absorbent layer and longitudinal sides of said slit, and lateral sides of said absorbent layer and lateral sides of said slit, and wherein the basis weight of the fluff-SAP mixture in said zone is greater than the basis weight of fluff-SAP mixture in the remaining portion of said absorbent layer.
11. A disposable absorbent layer as in claim 10 wherein the amount of SAP in said fluff-SAP mixture is from about 3 to about 80 weight percent of said mixture.
12. A disposable absorbent article as in claim 7 wherein said crotch region has a front edge and a back edge, said absorbent layer has a front edge and a back edge, said elongated slit has a front edge and a back edge and wherein the distance between the front edge of said slit and the front edge of said crotch region is less than the distance between the back edge of said slit and the back edge of said crotch region.
13. A liquid absorbent sheet having a top surface and a bottom surface, and a thickness of from about 100 to about 400 mils, said liquid absorbent sheet being defined by a pair of opposed longitudinal sides, a pair of opposed lateral sides, an elongated through slit extending from said top surface to said bottom surface of said liquid absorbent sheet, a fluff-SAP mixture enriched zone defined between longitudinal sides of said absorbent layer and longitudinal sides of said slit, and lateral sides of said absorbent layer and lateral sides of said slit, and wherein the amount of the fluff-SAP mixture in said zone is greater than the amount of fluff-SAP mixture in the remaining portion of said absorbent layer.

14. A liquid absorbent sheet as in claim 13 wherein the amount of SAP in said fluff-SAP mixture enriched zone is from about 3 to about 80 weight percent of said mixture.

15. A breathable disposable absorbent article comprising

- (a) a backsheet having opposed side edges and opposed front waist and back waist edges connecting said side edges, each of said side edges having a medial cutout portion.
- (b) a top sheet having opposed side edges and corresponding opposed front waist and back waist edges connecting said side edges, each of said side edges having a medial cutout portion, said backsheet and said topsheet being sealed together at their respective edges so as to form a unitary structure having leg openings defined by said medial cutout portions,
- (c) a liquid absorbent layer having a crotch region disposed between said topsheet and said backsheet, said liquid-absorbent layer having a top surface and a bottom surface and a single through slit extending from said top surface to said bottom surface of said liquid absorbent layer, said slit being from about 0.5 to about 1.5 inches wide and from about 2 to about 10 inches long and wherein said slit is disposed within said crotch region of said absorbent layer,
- (d) at least one releasable fastening means at each of said side edges disposed at one end of said absorbent article, and
- (e) at least one zone made of a perforated polymeric film disposed on said backsheet, said zone having an inside surface adherent to said backsheet, and an opposed outer surface adapted to be releasably engaged to said fastening means.

204020-1249001

10066724-020402

16. A breathable disposable absorbent article as in claim 15 having a pair of spaced apart landing zones, each landing zone having an inside surface adherent to said backsheet, and an opposed outer surface adapted to be releasably engaged to said fastening means.
17. A breathable disposable absorbent article as in claim 15 wherein said liquid absorbent layer is made of a material comprising a mixture of fluff and superabsorbent polymer (SAP).
18. A breathable disposable absorbent article as in claim 17 wherein the amount of SAP is from about 3 to about 80 weight percent of said fluff-SAP mixture.
19. A breathable disposable absorbent article as in claim 17 wherein said liquid absorbent layer is defined by a pair of opposed longitudinal sides and a pair of opposed lateral sides, and slit being defined by a pair of opposed longitudinal sides and a pair of opposed lateral sides, a fluff-SAP mixture enriched zone defined between longitudinal sides of said absorbent layer and longitudinal sides of said slit, and lateral sides of said absorbent later and lateral sides of said slit, and wherein the amount of the fluff-SAP mixture in said zone is greater than the amount of fluff-SAP mixture in the remaining portion of said absorbent layer.